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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/828,300 | 04/21/2004 | Nobuo Fujita | 119497 | 4809 |

25944 7590 10/02/2007
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P.O. BOX 19928
ALEXANDRIA, VA 22320

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| EXAMINER |
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WILLS, MONIQUE M

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| ART UNIT | PAPER NUMBER |
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1745

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| MAIL DATE | DELIVERY MODE |
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10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/828,300

Applicant(s)

NOBUO

Examiner

Monique M. Wills

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>11/29/06 & 4/21/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Election/Restrictions***

Claims 9-16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected method of controlling a fuel cell system, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 7/17/07.

Applicant's election with traverse of Group I in the reply filed on 7/17/07 is acknowledged. The traversal is on the ground(s) all claims are sufficiently related that a thorough search for the subject matter of any one Group of claims would encompass a search and the search can be made without a serious burden. This is not found persuasive because the claims are related as produce and process of use. The produce may be used in a materially different process. The process requires patentable weight to be given to the operation of the fuel cell, resulting in an independent and distinct invention. Because these inventions are independent and distinct, there would be a serious burden on the examiner to search.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear as to whether the claim language is drawn to a produce or a process. Specifically, in claim 2, describes a method of the judgment unit "when the pressure measured by the pressure measurement unit while the discharge valve is being kept open". In claim 3, the discharge valve" can execute a discharge process". Claim 4 describes "a first discharge process mode that repeats a discharge operation". Claim 5 requires "the discharge valve controller repeats the discharge process in a cyclic period". Claim 6 the discharge valve changes states in response to the establishment of the judgment. In claims 7 & 8, the discharge valve controller judges an impurity concentration, then executes the discharge process. It is uncertain as to whether the claims are methods are products. For the purposes of this office action, the examiner assumes a fuel cell system with the components of claim 1 are capable of operation in the manner set forth in claims 2-8.

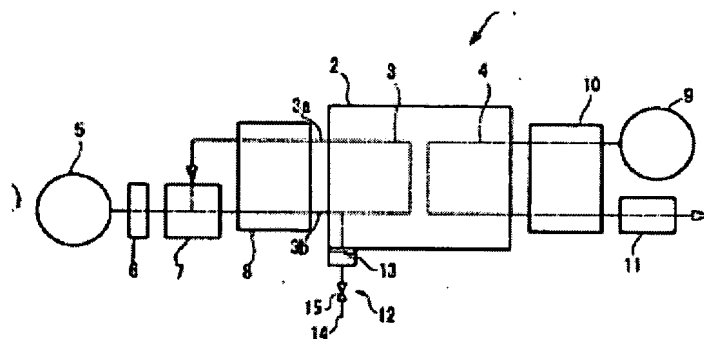
Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitsuru et al. JP2002-313403.

With respect to claim 1, Mitsuru teaches a fuel cell system comprising a fuel cell 2, that generates a power from the inside of a fuel gas flow passage 3. The gas flow passage supplies gas to the fuel cell. See Figure 1.



A water storage part equivalent to the instant water trap. The latching valve 6 changes the supply and a halt to the fuel gas passage. See par. 14. The bulb 15 (discharge valve) opens and closes in the exhaust port 14. See par. 16. A pressure measurement unit 16, 17 detects the pressure of the fuel gas in the exhaust port of the tank. See par. 16. A judgment unit,

judges whether the water level in the reservoir detected by the sensor is more than a predetermined threshold, if above the threshold, the bulb (discharge valve) is kept open for a predetermined time. See paragraphs 22 & 23. With respect to claims 2-8, the fuel cell system is equivalent to the system set forth in claim 1 therefore, the system is capable of operation in the manner set forth in claims 2-8.

Mitsuru does not expressly disclose that the water trap is disposed in the gas flow passage (claim 1).

However, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the water trap in the fuel gas passage in order to improve power generation by reducing the amount of water charged to the fuel cell.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

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If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MW

9/20/07


PATRICK JOSEPH RYAN
SUPERVISORY PATENT EXAMINER